

HORTICULTURE

WHITE BIRCH TREE LOUSE.

Insect Also Produces a Very Peculiar Gall on Witch Hazel—Formula for Spray.

In answering a query for a formula for the destruction of a plant louse that infests the birch trees and also produces a very peculiar gall on witch hazel, a writer in the Country Gentleman says it is exceedingly interesting. Since it was first described as occurring on the latter plant, it is now known as Hamamelis spinosus, the specific name having reference to the peculiar, many-spined, oval, green gall about three-quarters of an inch long, found on witch hazel from June to the latter part of October.

The life history of this species is peculiar, and has been recently worked out in detail by Theodore



Hamamelis spinosus—a, Mature Gall; b, Section of Same, after Pergande.

Pergande, of the bureau of entomology, U. S. department of agriculture. He finds winter eggs deposited on witch hazel stems from the middle of June to early in July remaining unhatched to the following May or June, thus being dormant almost 12 months. The young hatching from these eggs locate on the sides of buds, causing the tissues to multiply abnormally and inclose the insect within the peculiar gall described above. The plant life commences leaving these witch hazel galls in June and migrate to birches, the third generation being peculiar in closely resembling the young of an ordinary soft scale or Lecanium. This generation hibernates on the birch, activity being resumed the middle of the following April, the females producing young with conspicuous thick, white tufts at the posterior extremity. Their descendants in turn produce another generation, which is the one complained of.

These insects are frequently so abundant as to produce serious deformations of the foliage, causing



Hamamelis spinosus: Pseudogalls or Corrugations on Birch Leaves, After Pergande.

areas between the veins to swell and bulge, thus forming ridges or corrugations. According to the investigations of Mr. Pergande this species should forsake the birches shortly for the witch hazel.

An outbreak of this character, if the plant lice are very abundant and natural enemies not numerous, should be checked by thorough spraying with a kerosene emulsion, the standard formula diluted with nine parts of water, or a whale-oil soap solution, using one pound to six or seven gallons of water. The application should be early or the badly-curved foliage may make it almost impossible to obtain satisfactory results.

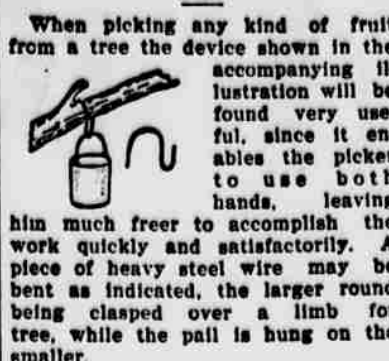
The elm tree beetle is best controlled by thorough spraying with an arsenical poison, preferably the commercial arsenate of lead, since the latter possesses superior adhesive properties. Care should be taken to throw this poisoned mixture upon the under side of the leaves, since the voracious grubs do not eat upon the upper surface.

Using a Weeder.

A great many farmers do not know how to get the most service from a weeder. When the soil becomes hard and compact after rains, the space between the rows may be broken up by the cultivator, after which the weeder will readily stir the soil in the rows. When used at the right time, myriads of small weeds may be destroyed before they become troublesome and moisture is conserved in a most effective manner by this tool with its many small teeth. It may be used on crops with which it would seem impossible without too great damage. For example, beans may be cultivated by means of the weeder when a few inches high, and if the work is done about midday, when the plants are limp, very few will be injured. Many bean growers who use the weeder sow slightly more seed to make provision for possible loss of plants. This vegetable should never be cultivated when the plants are wet.

HANDY LABOR-SAVING DEVICE

Tool for Use in Picking Fruit That Will Enable a Person to Use Both Hands.



SUPPORT FOR FLOWER VINES.

Two Long Sticks, Held by Screws, Easily Removed, Afford Protection from Severe Storms.

Last year I tried a new support for flowering vines which proved most satisfactory, says a writer in the Housekeeper. I took two light sticks long enough to reach across the end of the piazza where I wished to train the vines, and connected them with stout cords on which the vines might run. In the upper stick I fastened three screw eyes, which slipped over three corresponding hooks at the top of the piazza. Several times during the summer, when we had furious storms which whip the tender vines so ruinously, I unhooked the support and placed the vines flat on the piazza floor, securing the stick with a couple of stones. In this way they escaped the worst of the storm and were quite fresh when I hooked them in place again. Our vines never before lived through the summer in such good condition. The first frosty nights the vines were placed on the ground and covered with a blanket so that our blossoms remained quite late, and when at last they became frost-bitten it was very simple to remove both vines and support, leaving behind no dangling strings or wires.

Timely Farm Notes.

What is needed is intense farming, or farming in earnest.

Properly made kumyss is the most digestible form in which milk can be taken.

The man who can keep the double-trees of work from bumping him on the heels is indeed a general.

A team of draft mares is a better investment than money in the bank drawing four per cent. interest.

Fill up all the hog wallows and provide your swine with clean water to bathe in. A hog does not like a dirty bath any better than you like it.

The steer calf is worth pampering a little these days, for the market that is waiting him is sure to be one of profit. Meat will be meat from now on.

Take care to avoid shoulder galls and saddle sores. Lift the collar from the horse's neck occasionally and allow it to cool and be careful to see that the harness does not rub.

See that the fences are in good repair and by so doing avoid tiresome traps for strayed stock, to say nothing of unpleasantness with neighbors. It takes a good deal of Christian forbearance to view with equanimity a wheat field trampled to a mire by a careless neighbor's cattle.

The Rose Leaf Hopper.

The rose leaf hopper, also known as the white bug, attacks the under side of the tender leaves of roses. The female lays the eggs on the under side of the leaf, and as soon as hatched they suck the juices of the leaf. Their presence may be known by the leaves turning white and then yellow and dropping off, says a writer in the Baltimore American. Our rose growers recommend a solution of whale oil soap or tobacco water, applied with a fine spray both to the upper and under side of the leaf. The spraying to be effective, must be given as soon as they appear, and kept up until the leaves are strong enough to resist their attack. The whale oil solution is made as follows: Soap, one pound, cut fine; water, six gallons; dissolved, stir thoroughly before using; spray when cold.

Dwarf Apples.

Astrachan apples or dwarf trees four years old have set so full as to require half of them to be taken off, and with some trees two-thirds, says the American Cultivator.

Dwarf trees will require more pruning, the fruit to be thinned and higher cultivation. They may be protected against any and all kinds of insects, and as the fruit is finer in quality, if the quantity is less the higher value the fruit will command will bring up the average well with standard trees. There are so many difficulties attending the culture of the apple, the most being imported insect pests, that the business will have to be carried on largely by specialists in the future. The competition of western orchards will also be a factor in forcing better methods upon the eastern growers.

Best Market Pears.

The three varieties of pears that I have found best for market during the middle and late fall are Bartlett, Kieffer and Duchess, says a writer in the Baltimore American. I name these varieties because they respond best to cultivation and seem to be hardy. I can handle them all conveniently from cold storage whenever the markets want them. They are planted on land that is more or less clear and with good drainage.

Greater Corn Crops.

During the past five years—1903 to 1907—the corn crop in the United States has been greater than all other cereal crops combined, being over 2,500,000,000 bushels annually and valued at over \$1,250,000,000.

Cut Out Dead Wood.

Cut out the dead and unnecessary wood. It does five things: Keeps your ground cleaner, gives your fruit more sun, gives you larger crops and makes your trees safer to climb and easier to spray.

MISSOURI STATE NEWS

Scenes of the Oil Road.

The Standard Oil company is using Kansas City as an example of what can be done with oil on roads. A representative of the company who spoke to the St. Joseph Ad club said in the course of his speech: "They have 55 miles of boulevards in Kansas City, and every mile of them is oiled. Lawns along those boulevards are a beautiful green, and the houses appear newly painted. There is no dust. Before they oiled the boulevards in Kansas City they had to go over them after every heavy rain with repair gangs. That is no longer necessary. The use of oil has reduced the cost of maintenance 75 per cent. It costs less to oil the boulevards than it formerly cost to sprinkle them. They don't have to be sprinkled any more. The oil forms a cushion and deadens the noise. Kansas City is uphill and downhill but the oiled macadam doesn't wash. The oil acts as a binder and also renders the boulevards moisture proof."

Classes Are Held on Lawn.

The hot weather in Kirksville has routed the students and teachers of the State Normal school from the buildings, and nearly all the classes are held on the campus under the large forest trees. The innovation has made a hit with the students and there has been no disposition to "cut" classes, as there was before. It is no uncommon sight now to see classes containing 50 or more students assembled on the shady banks of Normal Lake, discussing some of the serious problems of history or science or pedagogy. Fans are not needed in these classes, for teachers and students, irrespective of sex, wear shirt waists.

For a National Park There.

At a meeting of Civil War veterans both the Blue and the Gray, held at Springfield to celebrate the 45th anniversary of the battle of Wilson Creek or Oak Hills, as it was called by the Confederates, an organization was effected to work for the establishment of a national park on the site of the battle field, 15 miles southwest of Springfield. Veterans of the opposing armies that met at Wilson Creek made short talks pledging their support to the movement. The commercial bodies of Springfield will take the matter up and work for the establishment of the park.

Convicted of Bigamy.

The jury in the case of James A. Barker, a real estate agent of Hartford, Ark., tried on the charge of bigamy, returned a verdict of guilty. His sentence is three years in the penitentiary. May 1 Barker went to Marshall and married Mrs. Maggie Casey. A few weeks later a woman claiming to be Mrs. Barker of Hartford, Ark., wrote to the postmaster, inquiring for her husband, James A. Barker. A warrant was issued for the arrest of Barker, who was found in Van Buren, Ark., and brought back.

World Challenge in Bean War.

The bean war in Higginsville should interest even the great Luther Burbank. A man believed victory was his when he exhibited a pod 28 inches long. But when Mrs. S. W. Brandaw, who has a garden patch east of town, heard about it, she rushed in and challenged the world with one 39 1/4 inches long, which is still growing.

Greene County Indictments.

Ten indictments have been returned by the grand jury which has been in session at Springfield. The bills are said to be for the illegal sale of liquor in Greene county towns outside of Springfield, the county with the exception of that place, being dry.

Girl Drowned While Bathing.

Miss Gladys Wellman, daughter of a furniture dealer of Connelville was drowned while bathing in the Charleston river. She was bathing with four other young ladies and one young man when they stepped into water 15 feet deep. The young man got four of the girls out of the water, but nearly lost his own life. The body of Miss Wellman was not found for several hours. She was about 15 years old.

Probe Platte City Lynching.

An investigation of the lynching at Platte City of George Johnson, who murdered John W. Moore, June 20, is being made by Frank Blair, assistant attorney general of Missouri. When the special grand jury, summoned by Judge A. D. Burnes met a rigid charge was delivered by the court concerning the lynching.

Yearling Mule Brings \$250.

A yearling mule, a native of Audrain county, was sold by a Mexican man for \$250. Missouri is the only state in which a sale could take place.

Lecture Not Appreciated.

A man who said he was walking from Boston to San Francisco, and paying his expenses by lecturing, collected ten cents in Ludlow. He was offended at this and said he had received \$4 for many a lecture not half so good.

Will Be Ready When Taft Comes.

A \$93,000 federal building is under construction in Cape Girardeau. The building may be completed in time for President Taft to dedicate it when he visits there in October.

When the Glaciers Travel.

Ellis Ewing, the "Missouri glaciologist," who is nine feet six inches tall, was a guest at the Hoxsey hotel in Mexico. She was on the way to the Bowling Green fair. Two beds had to be put together so that she would sleep comfortably.

Carries Its Own Punishment.

The police judge of St. Joseph doubled the fine of a man who said he did not read newspapers, although that sort of stupidity brings its own punishment.

GOT HIM!



Gertrude—The man I marry must be a genius.
Bertie—Thank heaven we have met!

Aid Fight Against Tuberculosis.

At the recent meeting of the National Association of Bill Posters, held in Atlanta, Ga., it was decided to donate to the campaign against tuberculosis \$1,200,000 worth of publicity. The bill posters in all parts of the United States and Canada will fill the vacant spaces on their 3,500 bill boards with large posters illustrating the ways to prevent and cure consumption. The Poster Printers' association has also granted \$200,000 worth of printing and paper for this work. This entire campaign of bill-board publicity will be conducted under the direction of the National Association for the Study and Prevention of Tuberculosis in co-operation with the National Bill Posters' association.

A Realist.

"I am a great believer in realism," remarked the poet, who was questioned with a rising inflection, thereby giving him the desired opening. "I sometimes carry my ideas of realism to a ridiculous extreme," continued the poet. "Indeed!" we exclaimed in amazement, somewhat impatient to reach the point of his witticism. "Yes," continued the poet, "the other day I wrote a sonnet to the gas company and purposely made the meter defective."

Your Salary.

The universe pays every man in his own coin; if you smile, it smiles upon you in return; if you frown, you will be frowned at; if you sing, you will be invited into gay company; if you think, you will be entertained by thinkers; and if you love the world and earnestly seek for the good that is therein, you will be surrounded by loving friends, and nature will pour into your lap the treasures of the earth. Censure, criticism and hate, and you will be censured, criticised and hated by your fellow men.—N. W. Zimmerman.

Sheer white goods.

In fact, any fine wash goods when new, owe much of their attractiveness to the way they are laundered, this being done in a manner to enhance their textile beauty. Home laundering would be equally satisfactory if proper attention was given to starching, the first essential being good starch, which has sufficient strength to stiffen without thickening the goods. Try Defiance Starch and you will be pleasantly surprised at the improved appearance of your work.

A Financial Epigram.

"H. H. Rogers," said a New York broker, "always advised young men to get hold of capital. He used to point out to them that without capital a man could do nothing, nothing. He used to pack this truth into a very neat epigram."

His Colors.

"What are your son's college colors?" "Well," answered Farmer Cornstarch, "Josh has figured so strong in hazel and football, I should say they must be black and blue."

Provisional.

Mother—Why should we make Willie a doctor when there are so many new doctors every year?
Father—But think of all the new ailments!

Ask Your Druggist for Allen's Foot-Ease.

"I tried ALLEN'S FOOT-EASE recently, and have just bought another supply. It cured my corns, and the hot, burning and itching sensation in my feet which was almost unbearable, and I would not be without it now.—Mrs. W. J. Walker, Camden, N. J." Sold by all Druggists, 25c.

An Argive Cowherd.

Argus was boasting of his 100 eyes. "Think of putting on 50 pairs of goggles when you want to motor!" he cited.

Chamberlain's 10c Pure Extract, and Chamberlain's Pure Phosphate Baking Powder.

Are Pure and Unadulterated, containing only those substances recognized and endorsed by the U. S. Government. At all Grocers. F. M. CHAMBERLAIN CO., St. Louis, Mo.

A Green One.

"Do you look for news of Howard's hunting trip in the sporting column?" "No, in the obituaries."—Life.

Resiliency of Language.

"I say, we are down on our luck!" "Yes, we are certainly up against it!"

All a Matter of Comparison.

In blind man's land a one-eyed man is a celebrity.—Baltimore Sun.

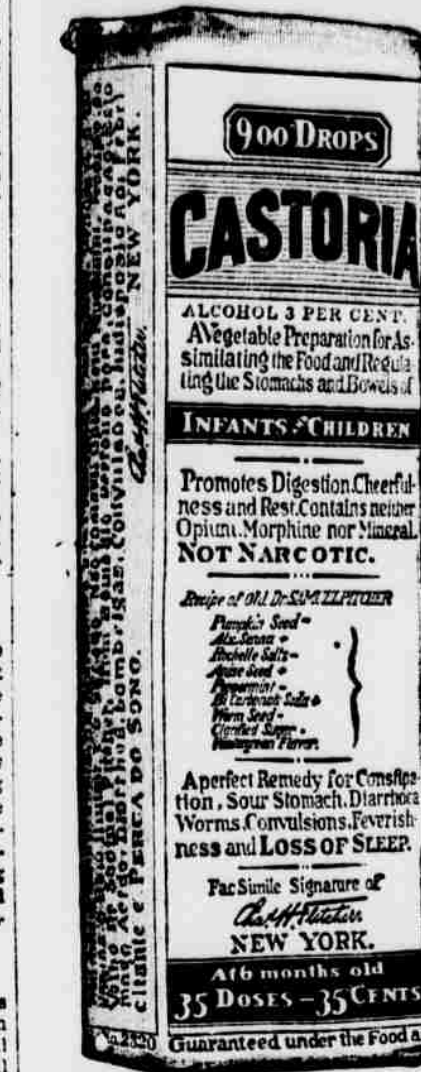
Many who used to smoke 10c cigars are now smoking Lewis' Single Binder straight 5c.

Too many men try to build a skyscraper on a one-story foundation.

What is Castoria.

CASTORIA is a harmless substitute for Castor Oil, Paregorio, Drops and Soothing Syrups. It is pleasant. It contains neither Opium, Morphine nor other Narcotic substance. Its age is its guarantee. It destroys Worms and allays Feverishness. It cures Diarrhoea and Wind Colic. It relieves Teething Troubles, cures Constipation and Flatulency. It assimilates the Food, regulates the Stomach and Bowels, giving healthy and natural sleep. The children's Panacea—The Mother's Friend.

The Kind You Have Always Bought, and which has been in use for over 30 years, has borne the signature of Chas. H. Fletcher, and has been made under his personal supervision since its infancy. Allow no one to deceive you in this. All Counterfeits, Imitations and "Just-as-good" are but Experiments that trifle with and endanger the health of Infants and Children—Experience against Experiment.



Letters from Prominent Physicians addressed to Chas. H. Fletcher.

Dr. F. Gerald Dittmer, of Buffalo, N. Y., says: "Your Castoria is good for children and I frequently prescribe it, always obtaining the desired results."
Dr. Gustave A. Eisengraber, of St. Paul, Minn., says: "I have used your Castoria repeatedly in my practice with good results, and can recommend it as an excellent, mild and harmless remedy for children."
Dr. E. J. Dennis, of St. Louis, Mo., says: "I have used and prescribed your Castoria in my sanitarium and outside practice for a number of years and find it to be an excellent remedy for children."
Dr. S. A. Buchanan, of Philadelphia, Pa., says: "I have used your Castoria in the case of my own baby and find it pleasant to take, and have obtained excellent results from its use."
Dr. J. E. Simpson, of Chicago, Ill., says: "I have used your Castoria in cases of colic in children and have found it the best medicine of its kind on the market."
Dr. R. E. Edmonds, of Omaha, Neb., says: "I find your Castoria to be a standard family remedy. It is the best thing for infants and children I have ever known and I recommend it."
Dr. L. R. Robinson, of Kansas City, Mo., says: "Your Castoria certainly has merit. Is not its age, its continued use by mothers through all these years, and the many attempts to imitate it, sufficient recommendation? What can a physician add? Leave it to the mothers."
Dr. Edwin F. Pardee, of New York City, says: "For several years I have recommended your Castoria and shall always continue to do so, as it has invariably produced beneficial results."
Dr. N. B. Sizer, of Brooklyn, N. Y., says: "I object to what are called patent medicines, where maker alone knows what ingredients are put in them, but I know the formula of your Castoria and advise its use."

GENUINE CASTORIA ALWAYS Bears the Signature of

Chas. H. Fletcher.

The Kind You Have Always Bought In Use For over 30 Years.

THE CENTRAL COMPANY, 27 MURRAY STREET, NEW YORK CITY.

USE THE BEST FAULTLESS STARCH FOR SHIRTS COLLARS CUFFS AND FINE LINEN

THOUSANDS OF TESTIMONIALS from grateful users have demonstrated that eruptions, inflammation and irritation of the skin, shingles, tetter, itching and inflamed piles, will promptly respond to the local application of RESINOL and their reports of the excellent results obtained furnish unquestionable proof of the value of this remedy. So a large and increasing number of people are using RESINOL CHEMICAL COMPANY, BALTIMORE, MD. "It is as good for horses and dogs as for mankind." W. P. Schmitz, Veterinarian, Hillsdale, Mass.

HAMLIN'S WIZARD OIL GREAT FOR PAIN

GAVE HER AN IDEA.

They Were Good Mothers.

Elizabeth Cady Stanton is quoted as saying that a woman's first duty is to develop all her powers and possibilities, that she may better guide and serve the next generation. Mrs. Stanton raised seven uncommonly healthy and handsome children, says an admirer of hers and the children of Mrs. Julia Ward Howe testify to the virtues of the noted woman as a mother. The eagle may be as good a mother as the hen or the goose.

The greatest evils are from within us, and from ourselves also we must look for our greatest good.—Jeremy Taylor.

DODD'S KIDNEY PILLS

FOR ALL KIDNEY DISEASES.

FOR RHEUMATISM, BRUISES, DIABETES, BACKACHE.

375 GUARANTEE.

Patents.

W. N. U., ST. LOUIS, MO. 34-1909.

Is Your Health Worth 10c?

That's what it costs to get a week's treatment of CASCARETS. They do more for you than any medicine on Earth. Sickness generally shows and starts first in the Bowels and Liver; CASCARETS cure these. It's so easy to try—why not start tonight and have help in the morning?

CASCARETS are a box for a week's treatment, all druggists, biggest seller in the world. Millions of boxes a month.

Shave Yourself NO STROPPING NO HONING

KNOWN THE WORLD OVER

KNOWN SINCE 1836 AS RELIABLE

PLANTER'S C & C OR BLACK CAPSULES

SUPERIOR REMEDY—URINARY DISCHARGE

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FOR ALL FLYES AND MOSQUITOES

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